

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Funke *et al.*

Appl. No.: 10/578,512

§ 371 (c) Date: April 5, 2007

For: **Active Agent Combinations with
Insecticidal and Acaricidal Properties**

Confirmation No.: 4985

Art Unit: 1616

Examiner: Pak, John D.

Declaration of Heike Hungenberg under 37 C.F.R. §1.132

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

I, Heike Hungenberg, of Grünewaldstr. 39b, 40764 Langenfeld , Germany, a citizen of Langenfeld, Germany, hereby declare:

1. That I am a biologist having studied at the University of Giessen, Germany.
2. That I received my diploma degree in biology at the University of Giessen, Germany in 1992.
3. That I entered the employment of Bayer in 1992 and that I am presently employed by Bayer CropScience AG, the assignee of the above-captioned application.
4. that I currently hold the position of a scientist within the group of Product and Project Support, in which I supervise the biological tests of insecticides; and that I have held this position for 8 years;
5. that I am named as an inventor in U.S. Patent Application No. 10/578,512 ("Application") which is the U.S. National Phase Application of International Application No. PCT/EP2004/012329, which has been assigned to Bayer CropScience AG

6. that I have read and understand the specification and claims of the Application;

7. that compounds (I-1), (I-2), Abamectin, Diafenthiuron, Spinosad, Endosulfan, and compounds of the formula (II-1), described in the Application, were tested as described in Examples A - I, below;

8. that Examples A - I were carried out under my supervision and direction;

9. that the expected efficacy of a given combination of two compounds is calculated as follows (see Colby, S.R., „Calculating Synergistic and antagonistic Responses of Herbicide Combinations“, Weeds 15, pp. 20-22, 1967):
If

X is the efficacy expressed in % mortality of the untreated control for test compound A at a concentration of m ppm respectively m g/ha,

Y is the efficacy expressed in % mortality of the untreated control for test compound B at a concentration of n ppm respectively n g/ha,

E is the efficacy expressed in % mortality of the untreated control using the mixture of A and B at m and n ppm respectively m and n g/ha,

$$\text{then is} \quad E = X + Y - \frac{X \cdot Y}{100}$$

If the observed insecticidal efficacy of the combination is higher than the one calculated as „E“, then the combination of the two compounds is more than additive, i.e., there is a synergistic effect.

* obs. = observed insecticidal efficacy

Example B**Heliothis armigera test**

Solvent: 7 parts by weight of dimethylformamide

Emulsifier: 2 parts by weight of alkylaryl polyglycoether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amount of solvent and emulsifier, and the concentrate is diluted with emulsifier-containing water to the desired concentration.

Soybean shoots (*Glycine max*) are treated by being dipped into the preparation of the active compound of the desired concentration and are infested with larvae of the cotton boll worm (*Heliothis armigera*) as long as the leaves are still moist.

After the specified period of time, the mortality in % is determined. 100 % means that all the caterpillars have been killed; 0 % means that none of the caterpillars have been killed.

According to the present application in this test e.g. the following combinations show a synergistic effect in comparison to the single compounds:

Table B1

Plant damaging insects

Heliothis armigera - Test

<u>Active Ingredient</u>	<u>Concentration</u> <u>in ppm</u>	<u>Efficacy</u> <u>in % after 3d</u>
II-1-4	0,0064	55
Spinosad	0,032	0
II-1-4 + Spinosad (1 : 5) according to the invention	0,0064 + 0,032	<div>obs.* cal.**</div> <div>80 55</div>

* obs. = observed

insecticidal

efficacy

** cal. = efficacy calculated with Colby-formula

Example C**Myzus persicae - test**

Solvent: 78 parts by weight of acetone
1,5 parts by weight of dimethylformamide

Emulsifier: 0,5 parts by weight of alkylaryl polyglykoether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amount of solvent and emulsifier, and the concentrate is diluted with emulsifier-containing water to the desired concentration.

Cabbage leaves (*Brassica oleracea*) which are heavily infested by the green peach aphid (*Myzus persicae*) are treated by being sprayed with the preparation of the active compound at the desired concentration.

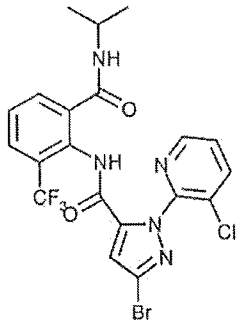
After the specified period of time, the mortality in % is determined. 100 % means that all the aphids have been killed; 0 % means that none of the aphids have been killed.

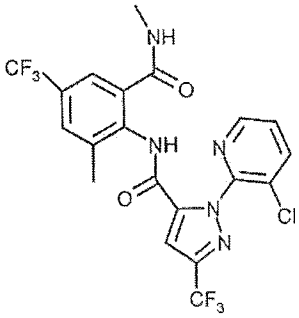
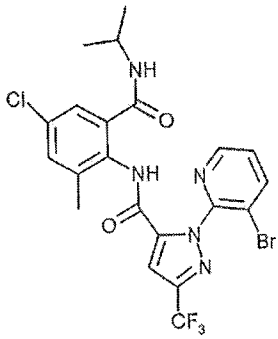
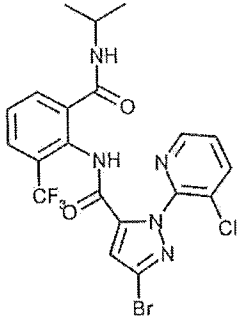
According to the present application in this test e.g. the following combinations show a synergistic effect in comparison to the single compounds:

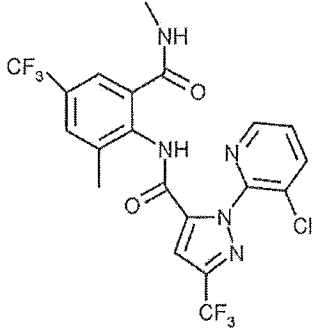
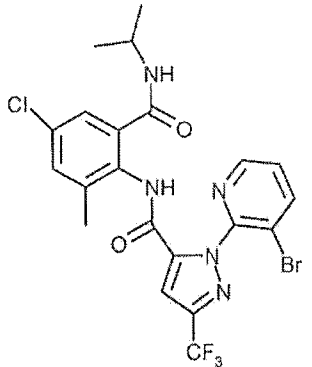
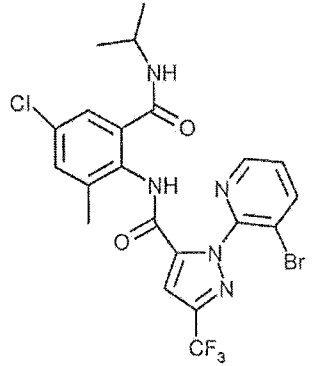
Table C1

Plant damaging insects

Myzus persicae - Test

<u>Active Ingredient</u>	<u>Concentration</u> <u>in g/ha</u>	<u>Efficacy</u> <u>in % after 1^d</u>
	4	0
II-1-1	4	30
II-1-24	4	0
II-1-12	4	20
II-1-4		

	4	50
	4	50
II-1-2	4	0
	4	0
Abamectin	4	0
(I-2)	100	0
(I-1)	100	0
 + Abamectin (1 : 1) according to the invention	4 + 4	$\frac{\text{obs.}^*}{50}$ $\frac{\text{cal.}^{**}}{0}$

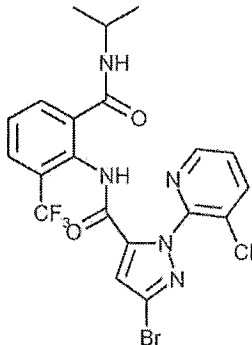
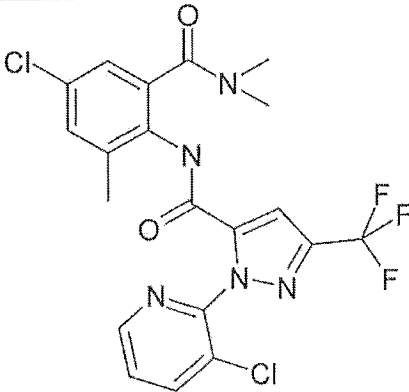
 <p>+ Abamectin (1 : 1) according to the invention</p>	4 + 4	<u>obs.*</u> 70	<u>cal.**</u> 50
II-1-2 + Abamectin (1 : 1) according to the invention	4 + 4	<u>obs.*</u> 50	<u>cal.**</u> 0
 <p>+ Abamectin (1 : 1) according to the invention</p>	4 + 4	<u>obs.*</u> 50	<u>cal.**</u> 0
II-1-24 + (I-2) (1 : 25) according to the invention	4 + 100	<u>obs.*</u> 40	<u>cal.**</u> 0
II-1-4 + (I-2) (1 : 25) according to the invention	4 + 100	<u>obs.*</u> 70	<u>cal.**</u> 50
 <p>+ (I-2) (1 : 25) according to the invention</p>	4 + 100	<u>obs.*</u> 50	<u>cal.**</u> 0
II-1-1 + (I-1) (1 : 25)		<u>obs.*</u>	<u>cal.**</u>

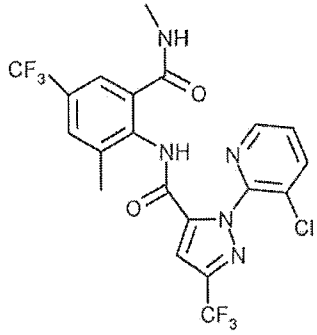
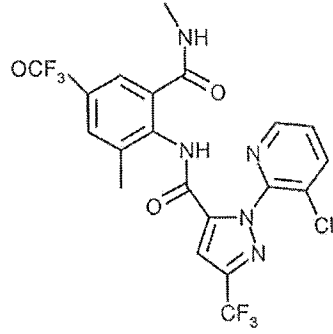
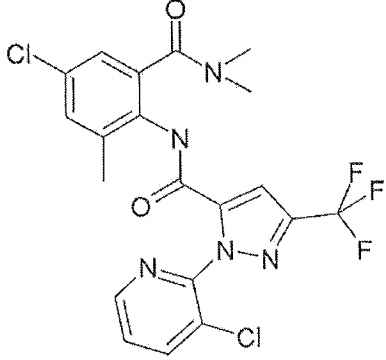
according to the invention	4 + 100	70	30
II-1-12 + (I-1) (1 : 25)		<u>obs.*</u>	<u>cal.**</u>
according to the invention	4 + 100	50	20
II-1-2 + (I-1) (1 : 25)		<u>obs.*</u>	<u>cal.**</u>
according to the invention	4 + 100	50	0

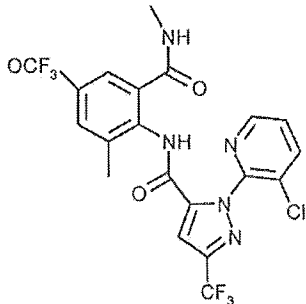
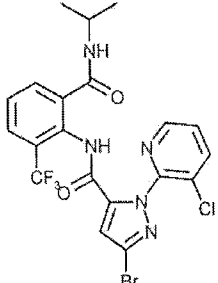
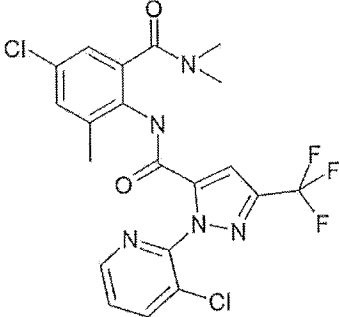
* obs. = observed insecticidal efficacy

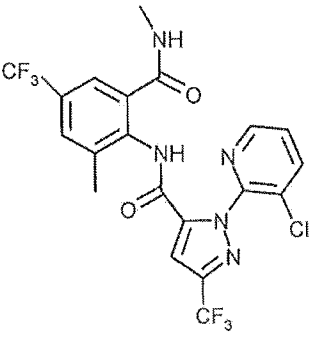
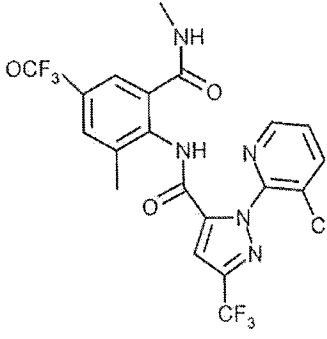
** cal. = efficacy calculated with Colby-formula

Table C2
Plant damaging insects
Myzus persicae - Test

<u>Active Ingredient</u>	<u>Concentration</u> <u>in g/ha</u>	<u>Efficacy</u> <u>in % after 6^d</u>
	0,8	0
II-1-52	0,8	10
	0,8	0
II-1-24	4	0
II-1-4	0,8	0

	0,8	0
	0,8	0
Abamectin	0,8	50
Diafenthiuron	0,8	5
(I-2)	20	50
(I-1)	100 20	0 0
 <p data-bbox="349 1745 634 1818">+ Abamectin (1 : 1) according to the invention</p>	0,8 + 0,8	$\frac{\text{obs.}^*}{70}$ $\frac{\text{cal.}^{**}}{50}$

 <p>+ Abamectin (1 : 1) according to the invention</p>	0,8 + 0,8	<table><tr><th><u>obs.*</u></th><th><u>cal.**</u></th></tr><tr><td>70</td><td>50</td></tr></table>	<u>obs.*</u>	<u>cal.**</u>	70	50
<u>obs.*</u>	<u>cal.**</u>					
70	50					
<p>II-1-4 + Diafenthiuron (1 : 1) according to the invention</p>	0,8 + 0,8	<table><tr><th><u>obs.*</u></th><th><u>cal.**</u></th></tr><tr><td>20</td><td>5</td></tr></table>	<u>obs.*</u>	<u>cal.**</u>	20	5
<u>obs.*</u>	<u>cal.**</u>					
20	5					
 <p>+ (I-2) (1 : 25) according to the invention</p>	0,8 + 20	<table><tr><th><u>obs.*</u></th><th><u>cal.**</u></th></tr><tr><td>80</td><td>50</td></tr></table>	<u>obs.*</u>	<u>cal.**</u>	80	50
<u>obs.*</u>	<u>cal.**</u>					
80	50					
 <p>+ (I-2) (1 : 25) according to the invention</p>	0,8 + 20	<table><tr><th><u>obs.*</u></th><th><u>cal.**</u></th></tr><tr><td>70</td><td>50</td></tr></table>	<u>obs.*</u>	<u>cal.**</u>	70	50
<u>obs.*</u>	<u>cal.**</u>					
70	50					

 + (I-2) (1 : 25) according to the invention	0,8 + 20	<u>obs.*</u> 90 <u>cal.**</u> 50
 + (I-2) (1 : 25) according to the invention	0,8 + 20	<u>obs.*</u> 70 <u>cal.**</u> 50
II-1-52 + (I-1) (1 : 25) according to the invention	0,8 + 20	<u>obs.*</u> 100 <u>cal.**</u> 10
II-1-24 + (I-1) (1 : 25) according to the invention	4 + 100	<u>obs.*</u> 80 <u>cal.**</u> 0
II-1-4 + (I-1) (1 : 125) according to the invention	0,8 + 100	<u>obs.*</u> 45 <u>cal.**</u> 0

* obs. = observed insecticidal efficacy
 ** cal. = efficacy calculated with Colby-formula

Example D**Phaedon cochleariae - test**

Solvent: 78 parts by weight of acetone
1,5 parts by weight of dimethylformamide

Emulsifier: 0,5 parts by weight of alkylaryl polyglykoether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amount of solvent and emulsifier, and the concentrate is diluted with emulsifier-containing water to the desired concentration.

Cabbage leaves (*Brassica oleracea*) are treated by being sprayed with the preparation of the active compound at the desired concentration and are infested with larvae of the mustard beetle (*Phaedon cochleariae*) as long as the leaves are still moist.

After the specified period of time, the mortality in % is determined. 100 % means that all the beetle larvae have been killed; 0 % means that none of the beetle larvae have been killed.

According to the present application in this test e.g. the following combinations show a synergistic effect in comparison to the single compounds:

Table D1
plant damaging insects
Phaedon cochleariae - test

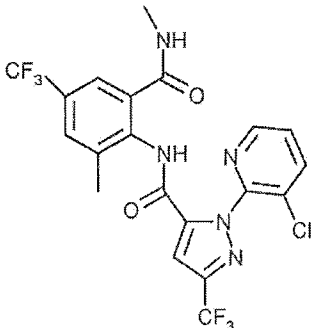
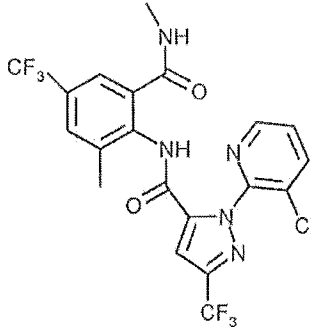
<u>Active Ingredient</u>	<u>Concentration</u> <u>in g/ha</u>	<u>Efficacy</u> <u>in % after 2^d</u>
II-1-54	0,16	33
II-1-12	0,8	17
II-1-4	4	50
(I-2)	100 20 4	0 0 0
(I-1)	100 20 4	0 0 0
II-1-54 + (I-2) (1 : 25) according to the invention	0,16 + 4	obs.* cal.** 100 33
II-1-12 + (I-2) (1 : 25)		obs.* cal.**

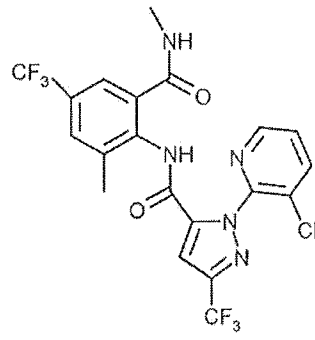
according to the invention	0,8 + 20	50	17
II-1-4 + (I-2) (1 : 25) according to the invention	4 + 100	<u>obs.*</u> 67	<u>cal.**</u> 50
II-1-54 + (I-1) (1 : 25) according to the invention	0,16 + 4	<u>obs.*</u> 100	<u>cal.**</u> 33
II-1-12 + (I-1) (1 : 25) according to the invention	0,8 + 20	<u>obs.*</u> 67	<u>cal.**</u> 17
II-1-4 + (I-1) (1 : 25) according to the invention	4 + 100	<u>obs.*</u> 67	<u>cal.**</u> 50

*obs. = observed insecticidal efficacy

** cal. = efficacy calculated with Colby-formula

Table D2
plant damaging insects
Phaedon cochleariae – test

<u>Active Ingredient</u>	<u>Concentration</u> <u>in g/ha</u>	<u>Efficacy</u> <u>in % after 6d</u>
II-1-52	0,16	33
II-1-24	0,16	33
	0,16	33
(I-2)	4	0
(I-1)	4	0
II-1-52 + (I-2) (1 : 25) according to the invention	0,16 + 4	obs.* 50 cal.** 33
 + (I-2) (1 : 25) according to the invention	0,16 + 4	obs.* 67 cal.** 33
II-1-52 + (I-1) (1 : 25) according to the invention	0,16 + 4	obs.* 67 cal.** 33
II-1-24 + (I-1) (1 : 25) according to the invention	0,16 + 4	obs.* 83 cal.** 33

 <p>+ (I-1) (1 : 25) according to the invention</p>	0,16 + 4	<table><tr><td><u>obs.</u>[*]</td><td><u>cal.</u>^{**}</td></tr><tr><td>83</td><td>33</td></tr></table>	<u>obs.</u> [*]	<u>cal.</u> ^{**}	83	33
<u>obs.</u> [*]	<u>cal.</u> ^{**}					
83	33					

*obs.

=

observed

insecticidal

efficacy

** cal. = efficacy calculated with Colby-formula

Example E**Phaedon cochleariae - test**

Solvent: 7 parts by weight of dimethylformamide

Emulsifier: 2 parts by weight of alkylaryl polyglycoether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amount of solvent and emulsifier, and the concentrate is diluted with emulsifier-containing water to the desired concentration.

Cabbage leaves (*Brassica oleracea*) are treated by being dipped in the preparation of the active compound at the desired concentration and are infested with larvae of the mustard beetle (*Phaedon cochleariae*) as long as the leaves are still moist.

After the specified period of time, the mortality in % is determined. 100 % means that all the beetle larvae have been killed; 0 % means that none of the beetle larvae have been killed.

According to the present application in this test e.g. the following combinations show a synergistic effect in comparison to the single compounds:

Table E1
plant damaging insects
Phaedon cochleariae – test

<u>Active Ingredient</u>	<u>Concentration</u> <u>in ppm</u>	<u>Efficacy</u> <u>in % after 4d</u>
II-1-4	0,16	5
Diafenthiuron	20	0
II-1-4 + Diafenthiuron (1: 125) according to the invention	0,16 + 20	<u>Obs.*</u> <u>cal.**</u> 15 5

* obs.

=

observed

insecticidal

efficacy

** cal. = efficacy calculated with Colby-formula

Example F**Plutella xylostella - test**

Solvent: 7 parts by weight of dimethylformamide

Emulsifier: 2 parts by weight of alkylaryl polyglycoether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amount of solvent and emulsifier, and the concentrate is diluted with emulsifier-containing water to the desired concentration.

Cabbage leaves (*Brassica oleracea*) are treated by being dipped into the preparation of the active compound of the desired concentration and are infested with larvae of the diamond back moth (*Plutella xylostella*) as long as the leaves are still moist.

After the specified period of time, the mortality in % is determined. 100 % means that all the caterpillars have been killed; 0 % means that none of the caterpillars have been killed.

According to the present application in this test e.g. the following combinations show a synergistic effect in comparison to the single compounds:

Table F1
plant damaging insects
Plutella xylostella – test

<u>Active Ingredient</u>	<u>Concentration</u> <u>in ppm</u>	<u>Efficacy</u> <u>in % after 6d</u>
II-1-4	0,0064	37,5
Abamectin	0,00128	12,5
II-1-4 + Abamectin (5 : 1) according to the invention	0,0064 + 0,00128	<div>obs.* cal.**</div> <div>62,5 45,32</div>

* obs.

=

observed

insecticidal

efficacy

** cal. = efficacy calculated with Colby-formula

Example G**Spodoptera frugiperda - test**

Solvent: 78 parts by weight of acetone
1,5 parts by weight of dimethylformamide

Emulsifier: 0,5 parts by weight of alkylaryl polyglykoether

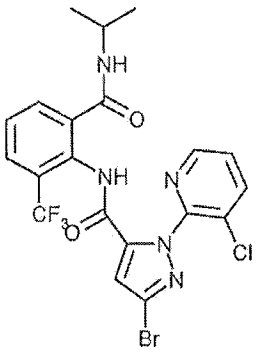
To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amount of solvent and emulsifier, and the concentrate is diluted with emulsifier-containing water to the desired concentration.

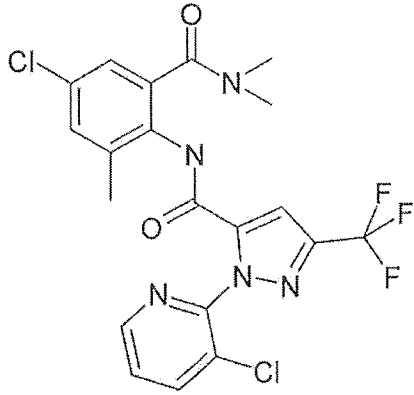
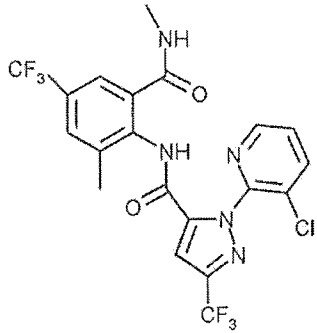
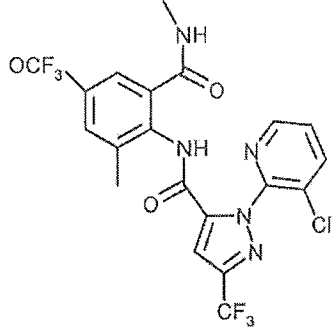
Cabbage leaves (*Brassica oleracea*) are treated by being sprayed with the preparation of the active compound at the desired concentration and are infested with larvae of the fall army worm (*Spodoptera frugiperda*) as long as the leaves are still moist.

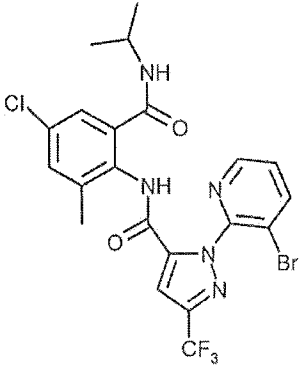
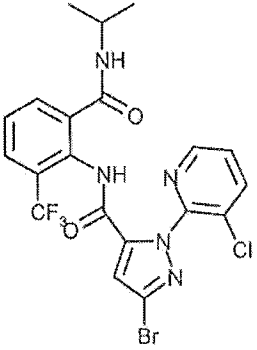
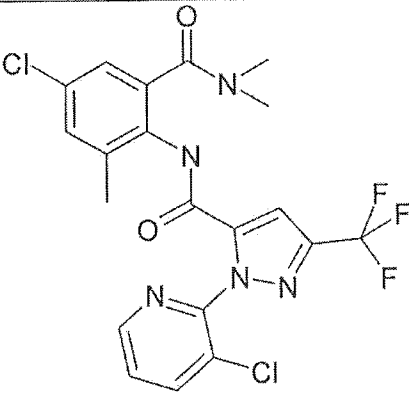
After the specified period of time, the mortality in % is determined. 100 % means that all the caterpillars have been killed; 0 % means that none of the caterpillars have been killed.

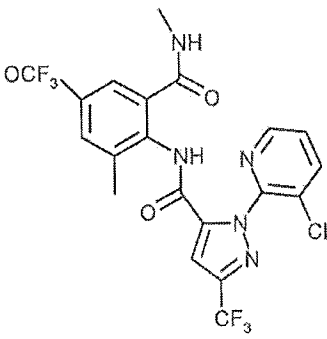
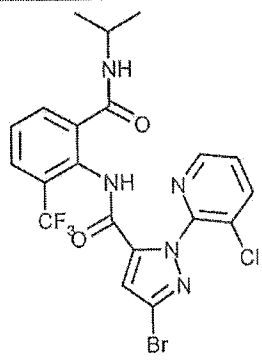
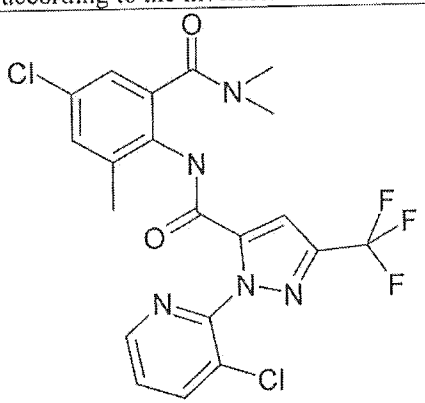
According to the present application in this test e.g. the following combinations show a synergistic effect in comparison to the single compounds:

Table G1: *Spodoptera frugiperda* – test

<u>Active Ingredient</u>	<u>Concentration</u> <u>in g/ha</u>	<u>Efficacy</u> <u>in % after 2^d</u>
	4	0
II-1-54	0,16	33
II-1-1	0,16	33

	4	50
	4	67
	4	33
II-1-2	0,8 0,16	67 33

	4	83
Abamectin	4 0,8	0 0
(I-2)	100 20 4	0 0 0
(I-1)	100 4	0 0
 + Abamectin (1 : 1) according to the invention	4 + 4	<u>obs.*</u> 17 <u>cal.**</u> 0
 + Abamectin (1 : 1) according to the invention	4 + 4	<u>obs.*</u> 100 <u>cal.**</u> 50

II-1-2 + Abamectin (1 : 1) according to the invention	0,8 + 0,8	<u>obs.*</u> 83 <u>cal.**</u> 67
II-1-54 + (I-2) (1 : 25) according to the invention	0,16 + 4	<u>obs.*</u> 83 <u>cal.**</u> 33
II-1-1 + (I-2) (1 : 25) according to the invention	0,16 + 4	<u>obs.*</u> 83 <u>cal.**</u> 33
 (1 : 25) according to the invention	4 + 100	<u>obs.*</u> 50 <u>cal.**</u> 33
II-1-2 + (I-2) (1 : 25) according to the invention	0,8 + 20	<u>obs.*</u> 83 <u>cal.**</u> 67
 (1 : 25) according to the invention	4 + 100	<u>obs.*</u> 17 <u>cal.**</u> 0
 (I-1) (1 : 25) according to the invention	4 + 100	<u>obs.*</u> 83 <u>cal.**</u> 50

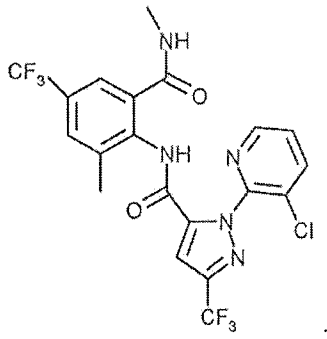
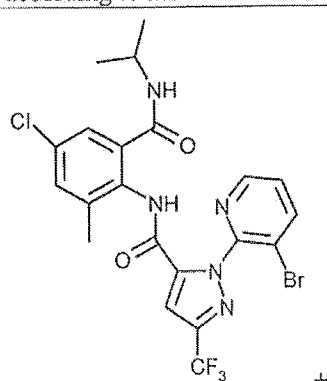
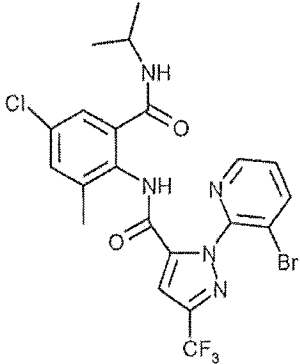
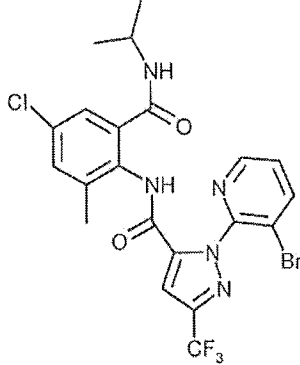
 (I-1) (1 : 25) according to the invention	4 + 100	$\frac{\text{obs.}^*}{83}$ $\frac{\text{cal.}^{**}}{67}$
II-1-2 + (I-1) (1 : 25) according to the invention	0,16 + 4	$\frac{\text{obs.}^*}{67}$ $\frac{\text{cal.}^{**}}{33}$
 (I-1) (1 : 25) according to the invention	4 + 100	$\frac{\text{obs.}^*}{100}$ $\frac{\text{cal.}^{**}}{83}$
* obs. = observed insecticidal efficacy ** cal. = efficacy calculated with Colby-formula		

Table G2
plant damaging insects
Spodoptera frugiperda – test

<u>Active Ingredient</u>	<u>Concentration</u> <u>in g/ha</u>	<u>Efficacy</u> <u>in % after 6d</u>

	0,16	83
(I-2)	4	0
 <p data-bbox="342 1150 630 1234">+ (I-2) (1 : 25) according to the invention</p>	0,16 + 4	$\frac{\text{obs.}^*}{100} \quad \frac{\text{cal.}^{**}}{83}$
* obs.	= observed	insecticidal efficacy
** cal. = efficacy calculated with Colby-formula		

Example H**Tetranychus test** (OP-resistant/dip test)

Solvent: 78 parts by weight of acetone
1,5 parts by weight of dimethylformamide

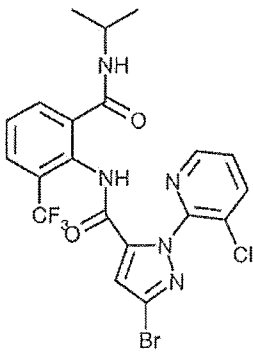
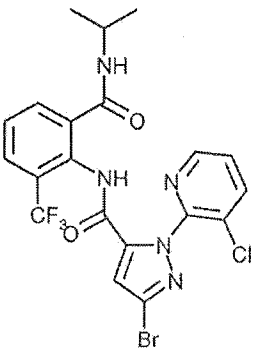
Emulsifier: 0,5 parts by weight of alkylaryl polyglykoether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amount of solvent and emulsifier, and the concentrate is diluted with emulsifier-containing water to the desired concentration.

Bean plants (*Phaseolus vulgaris*) which are heavily infested with all stages of the two-spotted spider mite (*Tetranychus urticae*) are treated by being sprayed with the preparation of the active compound at the desired concentration.

After the specified period of time, mortality in % is determined. 100 % means that all the spider mites have been killed; 0 % means that none of the spider mites have been killed. According to the present application in this test e.g. the following combination showed a synergistic effect in comparison to the single compounds:

Table H1
Plant damaging mites
Tetranychus urticae (OP-resistant) – Test

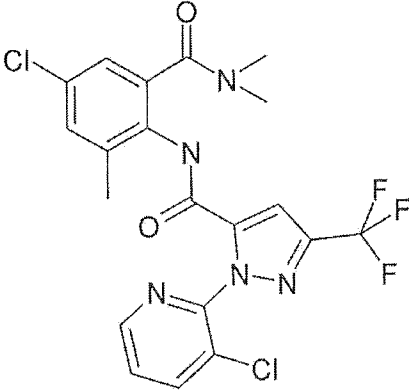
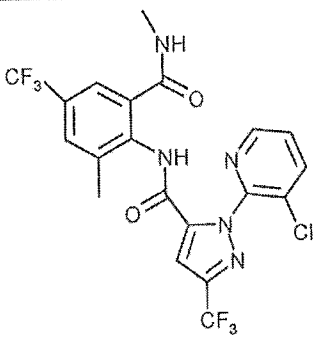
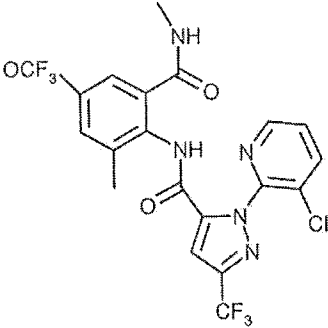
<u>Active Ingredient</u>	<u>Concentration</u> <u>in g/ha</u>	<u>Efficacy</u> <u>in % after 2^d</u>
	4	0
II-1-52	0,8	0
II-1-1	0,16	0
II-1-12	4	0
II-1-2	4	0
(I-1)	100 20 4	50 10 0
 + (I-1) (1 : 25) according to the invention	4 + 100	<u>obs.*</u> <u>cal.**</u> 80 50
II-1-52 + (I-1) (1 : 25) according to the invention	0,8 + 20	<u>obs.*</u> <u>cal.**</u> 50 10

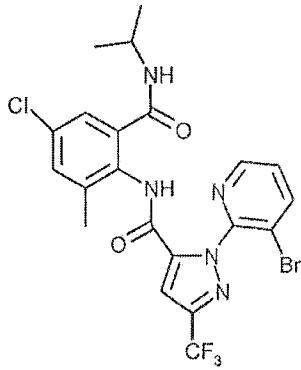
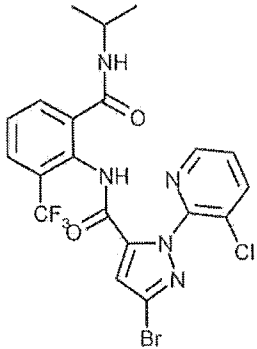
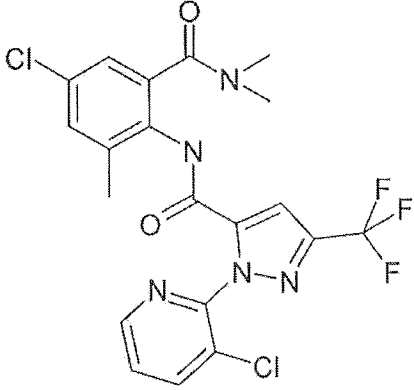
II-1-1 + (I-1) (1 : 25) according to the invention	0,16 + 4	<u>obs.*</u> 70	<u>cal.**</u> 0
II-1-12 + (I-1) (1 : 25) according to the invention	4 + 100	<u>obs.*</u> 99	<u>cal.**</u> 50
II-1-2 + (I-1) (1 : 25) according to the invention	4 + 100	<u>obs.*</u> 70	<u>cal.**</u> 50

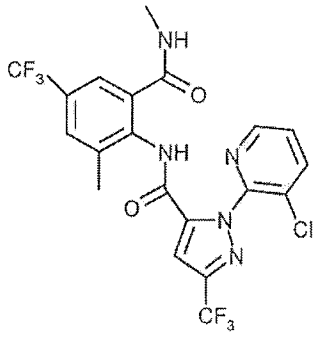
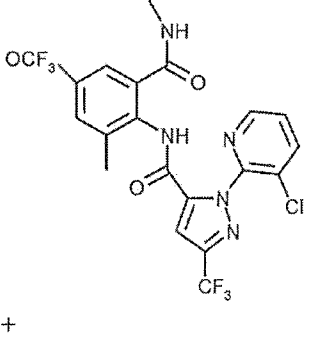
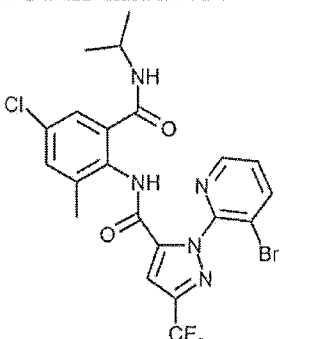
*obs. = observed insecticidal efficacy
 ** cal. = efficacy calculated with Colby-formula

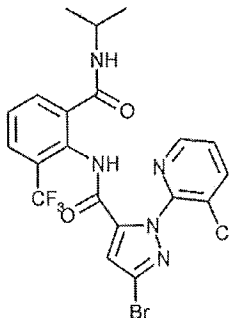
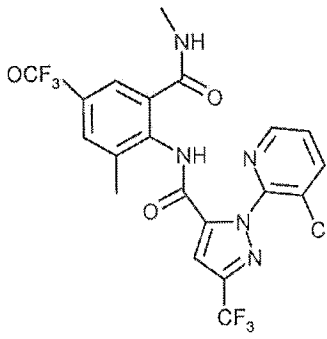
Table H2
 Plant damaging mites
 Tetranychus urticae (OP-resistant) – Test

<u>Active Ingredient</u>	<u>Concentration</u> <u>in g/ha</u>	<u>Efficacy</u> <u>in % after 6^d</u>
	0,032	0
II-1-54	0,032	0
II-1-52	0,032	0
II-1-1	0,16	0

	0,032 0,0064	0 0
II-1-24	0,032	0
II-1-12	0,032	0
II-1-4	4	0
	0,032 0,0064	0 0
	0,032	0
II-1-2	0,0064	0

	0,0064	0
Abamectin	0,032 0,0064	80 20
(I-2)	100 4 0,8	80 70 20
(I-1)	100 0,8	80 20
 + Abamectin (1 : 1) according to the invention	0,032 + 0,032	<u>obs.*</u> <u>cal.**</u> 100 80
 +	0,0064 + 0,0064	<u>obs.*</u> <u>cal.**</u> 50 20

Abamectin (1 : 1) according to the invention		
 + Abamectin (1 : 1) according to the invention	0,0064 + 0,0064	$\frac{\text{obs.}^*}{60}$ $\frac{\text{cal.}^{**}}{20}$
 + Abamectin (1 : 1) according to the invention	0,032 + 0,032	$\frac{\text{obs.}^*}{100}$ $\frac{\text{cal.}^{**}}{80}$
II-1-2 + Abamectin (1 : 1) according to the invention	0,0064 + 0,0064	$\frac{\text{obs.}^*}{50}$ $\frac{\text{cal.}^{**}}{20}$
 + Abamectin (1 : 1) according to the invention	0,0064 + 0,0064	$\frac{\text{obs.}^*}{80}$ $\frac{\text{cal.}^{**}}{20}$

 + (I-2) (1 : 25) according to the invention	0,032 + 0,8	<u>obs.*</u> 40 <u>cal.**</u> 20
II-1-54 + (I-2) (1 : 25) according to the invention	0,032 + 0,8	<u>obs.*</u> 70 <u>cal.**</u> 20
II-1-52 + (I-2) (1 : 25) according to the invention	0,032 + 0,8	<u>obs.*</u> 50 <u>cal.**</u> 20
II-1-1 + (I-2) (1 : 25) according to the invention	0,16 + 4	<u>obs.*</u> 90 <u>cal.**</u> 70
II-1-24 + (I-2) (1 : 25) according to the invention	0,032 + 0,8	<u>obs.*</u> 70 <u>cal.**</u> 20
II-1-12 + (I-2) (1 : 25) according to the invention	0,032 + 0,8	<u>obs.*</u> 60 <u>cal.**</u> 20
II-1-4 + (I-2) (1 : 25) according to the invention	4 + 100	<u>obs.*</u> 99 <u>cal.**</u> 80
 + (I-2) (1 : 25) according to the invention	0,032 + 0,8	<u>obs.*</u> 40 <u>cal.**</u> 20
II-1-54 + (I-1) (1 : 25) according to the invention	0,032 + 0,8	<u>obs.*</u> 100 <u>cal.**</u> 20

Example I

Solvent: 7 parts by weight of dimethylformamide

Emulsifier: 2 parts by weight of alkylaryl polyglycoether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amount of solvent and emulsifier, and the concentrate is diluted with emulsifier-containing water to the desired concentration.

Bean plants (*Phaseolus vulgaris*) which are heavily infested with all stages of the two-spotted spider mite (*Tetranychus urticae*) are treated by being dipped in the preparation of the active compound at the desired concentration.

After the specified period of time, mortality in % is determined. 100 % means that all the spider mites have been killed; 0 % means that none of the spider mites have been killed. According to the present application in this test e.g. the following combinations show a synergistic effect in comparison to the single compounds:

Table II
Plant damaging mites
***Tetranychus urticae* (OP-resistant) – Test**

<u>Active Ingredient</u>	<u>Concentration</u> <u>in ppm</u>	<u>Efficacy</u> <u>in % after 7^d</u>
II-1-9	100	0
(I-2)	0,8	0
(I-1)	0,8	65
II-1-9 + (I-2) (125 : 1) according to the invention	100 + 0,8	<u>obs.*</u> <u>cal.**</u> 20 0
II-1-9 + (I-1) (125 : 1) according to the invention	100 + 0,8	<u>obs.*</u> <u>cal.**</u> 95 65

*obs. = observed
 ** cal. = efficacy calculated with Colby-formula

insecticidal efficacy

11. The undersigned declares further that all statements made herein of his/her own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Signed at Monheim, Germany,

1. 12. 2010
Date

Reike Hys
NAME